UNIVERSITI TEKNOLOGI MARA

AN INTEGRATED VALUE MANAGEMENT (IVM) FRAMEWORK FOR CONTRACTORS IN DESIGN AND BUILD (D&B) PROJECTS

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

The concept of 'integrated value management' or IVM in the construction industry refers to joining a number of various elements into a specific project to move, operate and function harmoniously with the ultimate aim of achieving successful outcomes. Value management (VM) as a process improvement is vital to be embedded in D&B projects in relation to respond to the government's effort in enhancing innovation, productivity and quality of construction projects under the 10th Malaysian Plan. However, VM is been criticised for the fact that it unable to reduce D&B project delivery time and bring the project sooner to its operational phase. Furthermore, it was discovered that the negative attitude of project participants towards the VM process resulted in poor commitment and trust. The limitations of VM emphasised that VM alone cannot guarantee a successful project outcome. VM needs to be integrated with other process improvements (i.e., total quality management, risk management, partnering, value engineering and constructability) to form the IVM concept in order to deliver a successful D&B project. Thus, the aim of this research is to develop an IVM framework for contractors in D&B projects. The empirical research was undertaken by means of preliminary survey among four organisations (3 contractors' organisations and 1 client) that were involved in VM practices. It is followed by a questionnaire survey to 56 D&B contractors resulted in 31 valid responses being received. The results of the questionnaire survey were analysed using the Statistical Package for the Social Sciences (SPSS) software version 19. In order to underpin the questionnaire survey, semi-structured interviews with eight (8) experienced D&B contractors was conducted. Besides, four (4) case studies was carried out to provide a more thorough analysis of D&B projects which expected to reveal interesting information by the implementation of VM approach. Both data were analysed by thematic content analysis method. The findings from the research were used to develop an IVM framework which was validated to confirm its external validity. The findings revealed that VM was expected to be integrated with risk management, partnering and constructability throughout D&B project phases to form the IVM concept. It is to secure or increase contractor's profit margin, meet clients' needs and satisfaction and deliver a quality product. The IVM framework could provide more value added for D&B contractors in managing projects and achieving successful D&B project delivery.

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